with peripheral vascular disease before and after the recent introduction of percutaneous transluminal angioplasty and identified a new group of patients who could be treated.[1] Referral for angiography was increased by 66%, but the rate of surgery performed remained static at about 22%. A further 24% were treated by percutaneous transluminal angioplasty.

Lamberton documents an impressive 87% early clinical success rate with 80% patency at one year.[2] Mortality (1-2%) was associated with using the procedure in a group including patients with critically ischaemic limbs and poor general health. We now have more to offer patients with mild to moderate claudication than the simple sound advice to stop smoking and keep walking.

Thrombolysis is not a treatment for stable claudication. If sudden severe claudication or rest pain develops, however, the limb may have been rendered critically ischaemic. Immediate assessment in hospital may allow conservative methods like elevation, analgesia, and treatment of diabetes and infection where appropriate and invasive techniques including thrombolysis, angioplasty, and surgery to prevent skin necrosis.

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1 Anderson JB, Wolinski AP, Wells IP, Wilkins DC, Bliss BP. The impact of percutaneous transluminal angioplasty on the management of peripheral vascular disease. *Br J Surg* 1986; **73**:17-9.
2 Lamberton A. Percutaneous transluminal angioplasty. *Br J Surg* 1986;**73**:91-7.

Care of physically handicapped young adults

SIR,—Drs Martin C O Bax and others (23 April, p 1153) highlighted the deficiencies in health care for young physically handicapped people. We agree that teams for the physically handicapped should be encouraged to monitor this group to achieve the aim of an independent and fruitful life in the community.[1]

Sixteen of the patients described had mild disability and 48 had moderate disability, so it is disappointing that so few are independent of their families. Our experience of people with juvenile chronic arthritis has shown a greater amount of financial and physical independence[2] (E Stephenson, seventh European rheumatology congress, Brighton, 1971). While we accept that 75% of children with juvenile chronic arthritis have a good prognosis[3] we think that the care during the often stormy time of adolescence contributes to the achievement of independence from the family.

The period of transition from paediatric to adult care is vital. There is often difficulty in recognising change on a background of chronic disease, and communication between all involved in providing care, with the general practitioner as the point of first contact, seems to be important.[4]

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1 Prince of Wales Advisory Group. *Living options; guidelines for those planning services for people with severe disabilities.* London: Prince of Wales Advisory Group on Disability, 1985.
2 Ansell BM, Wood PHN. Prognosis of juvenile chronic arthritis. *Clin Rheum Dis* 1976;**2**:397-412.
3 Hull RG. Outcome in juvenile arthritis. *Br J Rheumatol* 1988;**27**: 66-71.
4 Griffiths R. *Community care: agenda for action. A report to the secretary of state for social services.* London: HMSO, 1988.

Changes in social security benefits

SIR,—Within a few months after the recent changes in social security benefits I have already, as a member of mental health review tribunals, seen patients in whom these changes have apparently added greatly to the distress of their illness. I wonder if my experience is unusual.

The present rules state that inpatients, who usually have no income apart from non-contributory invalidity benefit, remain responsible for 20% of their rates bill. This inevitably leads to an increasing debt. My experience has been with council tenants to whom the local authority has invariably been charitable. There comes a time, however, when the authority suggests that the home be vacated to avoid further debt, always with an offer of a written promise to rehouse the patient after discharge from hospital. Nobody, especially the elderly, would enjoy the prospect of changing his or her home for no good reason, and certainly the well meaning promises of the authority will not be enough to counter the inevitable reinforcement of anxiety, depression, and even paranoia that commonly occurs in severe mental illness. It is especially important in the elderly patients that unnecessary change into an unfamiliar environment be avoided. In many cases the pattern of illness is such that the patient is readmitted to hospital, perhaps for several months, every few years or so. Are such patients now to be rehoused after every admission?

My first concern was that these regulations could aggravate mental illness and delay recovery. I now realise, however, that there is also likely to be no saving of public expense. With no home to return to a weekend leave, as a "trial" of recovery, is not possible, and a degree of extra clinical caution is inevitable. Some delay of discharge will probably occur while the complicated arrangements for moving into a new home are organised. In any of our psychiatric units a delay of discharge of even a fortnight is going to cost more than the whole of a typical rates bill for an entire year.

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Intravenous volume replacement

SIR,—The leading article by Mr G Ramsay (21 May, p 1422) outlines the indications and choices for intravenous fluid replacement. He failed to mention, however, the role of hypertonic saline solutions, which cause an increase in the osmotic pressure at the cell membrane that results in a shift of water from the intracellular space into the extracellular space. They are not only cost effective (1 litre of 1·8% sodium chloride costs about twice as much as 0·9% sodium chloride) but also of value in clinical practice in the treatment of hypovolaemia.

Hypertonic saline given to a group of severely injured patients resulted in a lower fluid requirement and a higher output of urine when compared with a control group.[1] This was also found in patients with severe burns, in whom such a solution additionally increased the chance of survival.[2] Finally, hypertonic saline has been used in the treatment of refractory shock.[3]

The safety of hypertonic solutions depends on how much of the intracellular volume can be safely transferred to the extracellular volume without interfering with cell function and on how rapidly hypernatraemia develops.[4]

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1 Holcroft JW, Vassar MJ, Turner JE, Derlet RW, Kramer GC. 3% NaCl and 7·5% NaCl/dextran in the resuscitation of severely injured patients. *Ann Surg* 1987;**206**:279-88.
2 Monafo WW, Halverson JD, Sechechtman K. The role of concentrated sodium solutions in the resuscitation of patients with severe burns. *Surgery* 1984;**95**:129-35.
3 de Felippe J Jr, Timoner J, Velasco IT, Lopes OU, Rocha-e-Silva M Jr. Treatment of refractory shock by 7·5% sodium choride injections. *Lancet* 1980;ii:1002-4.
4 Moss GS, Gould SA. Plasma expanders. *Am J Surg* 1988;**155**: 425-34.

SIR,—Mr G Ramsay (21 May, p 1422) gives a useful protocol for the initial resuscitation of a hypovolaemic patient with colloid followed by a mixture of colloid and crystalloid. Two further points merit discussion.

Firstly, Mr Ramsay mentions the advantages of indicators of tissue perfusion over conventional cardiovascular measurements. It has been shown that oxygen delivery and consumption are two of the most relevant indices of adequate tissue oxygenation. Maximising tissue oxygenation by aggressive resuscitation with substantial fluid volumes, supplemented with treatment with vasoactive drugs when required, is beneficial to the critically ill patient.[1] This method requires pulmonary artery pressure recording, but it makes sense to institute this early to ensure that treatment is accurate and complete. Multiple organ failure is more common after inadequate resuscitation, and delaying the institution of adequate cardiovascular monitoring until this occurs is illogical.

Secondly, the resuscitation of a hypovolaemic patient must feature more prominently in the undergraduate curriculum. House surgeons often see hypovolaemic patients, and too often their first thoughts are that intravenous fluids may cause circulatory overload and that oxygen may suppress the drive to respiration. Fear of these remarkably uncommon complications results in great morbidity from poor initial resuscitation.

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1 Shoemaker WC. Haemodynamic and oxygen transport patterns in septic shock: physiologic mechanisms and therapeutic implications. In: Sibbald WJ, Sprung CL, eds. *Perspectives on sepsis and septic shock.* Fullerton: Society of Critical Care Medicine, 1986.

Penicillin allergy

SIR,—Penicillins, with their low toxicity, are the best available bactericidal antibiotics. Patients who are incorrectly labelled "penicillin sensitive" may be denied optimal antibiotic treatment of severe infections, as underlined by Dr C R Kirk and others (30 April, p 1236).

Eighty five per cent of patients who are thought to be allergic to penicillin can tolerate the drug if it is given again. Professor Stephen T Holgate (30 April, p 1213) concludes that this phenomenon is caused by temporary sensitisation. Infection is a common cause of exanthemas and urticaria, especially in children.[1] This is a possible explanation of those cases of reported penicillin allergy which cannot be confirmed by testing. During infections some patients use salicylates to treat fever. These often produce urticaria and should not be ignored as a possible cause of some of these episodes. Many patients who are thought to be